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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,765	02/27/2004	Ogden Hadzizukic	1139-003C1	1900

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EXAMINER

FASTOVSKY, LEONID M

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/789,765	Applicant(s) HADZIZUKIC ET AL.	
	Examiner Leonid M. Fastovsky	Art Unit 3742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 21-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noda et al in view of Steuart et al and further in view of Masubuchi (6,472,442) and Hasegawa et al (5,550,190).

Noda teaches a steering wheel 3, comprising a core 4, an outer covering 21, a heater 7 disposed between the core and the outer covering, plurality of protrusions corresponding to spokes 2, cushion 5 made out of a polyurethane, a separator 12 made out of a polyester, and a heater wire-conductor 13 between the cushion and the separator. However, he does not disclose the heater cushion's and separator's elongation capabilities.

Steuart discloses a steering wheel heater having a heating element 6 being of a pattern configuration that is "inherently resiliently elongatable" (Fig. 1,4 and col. 2, lines 90-107).

Further, Masubuchi discloses a steering wheel having a rim part 14 covered by polyurethane elastomer 22 that can elongate up to 800% (Abstract, Fig.1, col. 7, lines 15-18)

Art Unit: 3742

In addition, Hasegawa discloses polyester used in a steering wheel or handle with excellent tensile elongation (Abstract, col. 11, lines 44-47).

It would have been obvious to one having ordinary skill in the art to modify Noda's invention to include a cushion as taught by Masubuchi and a separator as taught by Hasegawa in order to permit elongation of the cushion and the separator at least 50%, and the heater as taught by Steuart that can inherently elongate. While Steuart does not explicitly teach 15% elongation, one of ordinary skill in the art would have been able to arrive at this % without undue experimentation.

2. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noda in view of Steuart, Masubuchi and Hasegawa and further in view of Kurata et al.

Noda in view of Steuart, Masubuchi and Hasegawa discloses substantially the claimed invention, but does not disclose distinct zones. Kurata shows two distinct zones (Col. 5, lines 25-30). It would have been obvious to one having ordinary skill in the art to modify the invention of Noda in view of Steuart, Masubuchi and Hasegawa to use distinct zones as taught by Kurata and increase their number to three zones for redundancy in case one or two zones are damaged.

3. Claims 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noda in view of Masubuchi and Hasegawa and further in view of Sugiyama et al and Nagai (6,808,825).

Noda in view of Steuart, Masubuchi and Hasegawa discloses substantially the claimed invention, but does not disclose a conductor made out of a plurality of

Art Unit: 3742

wire strands having a diameter between about 0.007 mm and 0.011 mm and the strands are formed of a metal alloy of copper about 1% and 10% nickel.

Sugiyama discloses a heater 21 for a steering wheel-handle 1 and a strand of wires 28 with a diameter of 0.05-0.10 mm and made of copper nickel alloy (col. 5, lines 29-39) without disclosing a percentage of materials in the composition of the alloy.

Nagai discloses a copper nickel alloy foil that can be used as a conductor having copper up to 1% and nickel up to 2.5% (col. 4, lines 5-50).

It would have been obvious to one having ordinary skill in the art to modify the invention of Noda in view of Steuart, Masubuchi and Hasegawa to include the strands of heating wire as taught by Sugiyama for better strength and in a composition as taught by Nagai as an obvious functional equivalent.

4. Claims 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noda in view of Steuart, Masubuchi and Hasegawa and further in view of Plummer et al (6,284,809).

Noda in view of Steuart, Masubuchi and Hasegawa discloses substantially the claimed invention including the cushion 5 that is closer to the core 4 than the separator 12 and the conductor 13, can be folded over on itself, but does not disclose a heat transfer coefficient. Plummer discloses a resin for a synthetic foam composition having a thermal conductivity less than 0,12 watts/m K (col. 2, lines 58-62), the resin comprise polyurethanes and polyesters (col. 3, lines 57-65). It would have been obvious to one having ordinary skill in the art to modify

Art Unit: 3742

the invention of Nada in view of Steuart, Masubuchi and Hasegawa to include a conductor twisted at a connection of the heater 7 as an obvious design choice, and a thermal conductivity range as taught by Plummer as an obvious functional equivalent of a heat transfer coefficient.

5. Claims 29-30 rejected under 35 U.S.C. 103(a) as being unpatentable over Noda in view of Steuart, Masubuchi and Hasegawa and further in view of Haag. Noda in view of Steuart, Masubuchi and Hasegawa discloses substantially the claimed invention, but does not disclose that the cushion is laminated to the separator with an adhesive. Haag teaches a heated steering wheel with a heating element 28, wherein the cushion 24 is laminated to the separator 30 with an adhesive (col. 4, lines 40-50). It would have been obvious to one having ordinary skill in the art to modify the invention of Noda, Masubuchi and Hasegawa to include an adhesive as taught by Haag in order to better secure the structure of the heated wheel.

6. Claims 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noda in view of Steuart, Masubuchi and Hasegawa and further in view of Kurata.

Noda in view of Steuart, Masubuchi and Hasegawa discloses substantially the claimed invention including a heating element 6 having zig-zag configuration as disclosed by Steuart, a fleece layer corresponding to the cushion and the separator comprising polyurethane and polyester accordingly as disclosed by Noda, but does not disclose distinct zones. Kurata shows two distinct zones (Col. 5, lines 25-30). It would have been obvious to one having ordinary skill in the art

Art Unit: 3742

to modify the invention of Noda in view of Steuart, Masubuchi and Hasegawa to use distinct zones as taught by Kurata and increase their number to three zones for redundancy in case one or two zones are damaged.

7. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noda in view of Steuart, Masubuchi, Hasegawa and Kurata and further in view of Sugiyama and Nagai.

Noda in view of Steuart, Masubuchi, Hasegawa and Kurata discloses substantially the claimed invention, but does not disclose a conductor made out of a plurality of wire strands having a diameter between about 0.007 mm and 0.011 mm and the strands are formed of a metal alloy of copper about 1% and 10% nickel.

Sugiyama discloses a heater 21 for a steering wheel-handle 1 and a strand of wires 28 with a diameter of 0.05-0.10 mm and made of copper nickel alloy (col. 5, lines 29-39) without disclosing a percentage of materials in the composition of the alloy.

Nagai discloses a copper nickel alloy foil that can be used as a conductor having copper up to 1% and nickel up to 2.5% (col. 4, lines 5-50).

It would have been obvious to one having ordinary skill in the art to modify the invention of Noda in view of Steuart, Masubuchi, Hasegawa and Kurata to include the strands of heating wire as taught by Sugiyama for better strength and in a composition as taught by Nagai as an obvious functional equivalent.

Art Unit: 3742

8. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noda in view of Steuart, Masubuchi, Hasegawa and Kurata and further in view of Plummer.

Noda in view of Steuart, Masubuchi, Hasegawa and Kurata discloses substantially the claimed invention including the cushion 5 that is closer to the core 4 than the separator 12, but does not disclose a heat transfer coefficient. Plummer discloses a resin for a synthetic foam composition having a thermal conductivity less than 0,12 watts/m K (col. 2, lines 58-62) that corresponds to a heat transfer coefficient, the resin comprise polyurethanes and polyesters (col. 3, lines 57-65). It would have been obvious to one having ordinary skill in the art to modify the invention of Noda in view of Steuart, Masubuchi, Hasegawa and Kurata to include a thermal conductivity range as taught by Plummer in order to operate the heated steering wheel without using an additional power.

9. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noda in view of Steuart, Masubuchi, Hasegawa and Kurata and further in view of Haag.

Noda in view of Steuart, Masubuchi, Hasegawa and Kurata discloses substantially the claimed invention, but does not disclose that the cushion is laminated to the separator with an adhesive. Haag teaches a heated steering wheel with a heating element 28, wherein the cushion 24 is laminated to the separator 30 with an adhesive (col. 4, lines 40-50). It would have been obvious to one having ordinary skill in the art to modify the invention of Noda, Steuart,

Art Unit: 3742

8. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noda in view of Steuart, Masubuchi, Hasegawa and Kurata and further in view of Plummer.

Noda in view of Steuart, Masubuchi, Hasegawa and Kurata discloses substantially the claimed invention including the cushion 5 that is closer to the core 4 than the separator 12, but does not disclose a heat transfer coefficient. Plummer discloses a resin for a synthetic foam composition having a thermal conductivity less than 0,12 watts/m K (col. 2, lines 58-62) that corresponds to a heat transfer coefficient, the resin comprise polyurethanes and polyesters (col. 3, lines 57-65). It would have been obvious to one having ordinary skill in the art to modify the invention of Noda in view of Steuart, Masubuchi, Hasegawa and Kurata to include a thermal conductivity range as taught by Plummer in order to operate the heated steering wheel without using an additional power.

9. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noda in view of Steuart, Masubuchi, Hasegawa and Kurata and further in view of Haag.

Noda in view of Steuart, Masubuchi, Hasegawa and Kurata discloses substantially the claimed invention, but does not disclose that the cushion is laminated to the separator with an adhesive. Haag teaches a heated steering wheel with a heating element 28, wherein the cushion 24 is laminated to the separator 30 with an adhesive (col. 4, lines 40-50). It would have been obvious to one having ordinary skill in the art to modify the invention of Noda, Steuart,

Art Unit: 3742

Masubuchi, Hasegawa and Kurata to include an adhesive as taught by Haag in order to better secure the structure of the heated wheel

10. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Noda in view of Steuart, Masubuchi, Hasegawa, Kurata and Plummer and further in view of Sugiyama and Nagai.

Noda in view of Steuart, Masubuchi, Hasegawa and Kurata discloses substantially the claimed invention including a leather outer cover 21 disclosed by Noda, two distinct zones disclosed by Kurata (col. 5, lines 25-30), but does not disclose a heat transfer coefficient, three distinct zones, a conductor made out of a plurality of wire strands having a diameter between about 0.007 mm and 0.011 mm and the strands are formed of a metal alloy of copper about 1% and 10% nickel.

Plummer discloses a resin for a synthetic foam composition having a thermal conductivity less than 0,12 watts/m K (col. 2, lines 58-62) that corresponds to a heat transfer coefficient, the resin comprise polyurethanes and polyesters (col. 3, lines 57-65). It would have been obvious to one having ordinary skill in the art to modify the invention of Noda in view of Steuart, Masubuchi and Hasegawa to include a thermal conductivity range as taught by Plummer in order to operate the heated steering wheel without using an additional power

Sugiyama discloses a heater 21 for a steering wheel-handle 1 and a strand of wires 28 with a diameter of 0.05-0.10 mm and made of copper nickel alloy (col. 5, lines 29-39) without disclosing a percentage of materials in the composition of the alloy.

Art Unit: 3742

Nagai discloses a copper nickel alloy foil that can be used as a conductor having copper up to 1% and nickel up to 2.5% (col. 4, lines 5-50).

It would have been obvious to one having ordinary skill in the art to modify the invention of Noda in view of Steuart, Masubuchi, Hasegawa and Plummer to increase the number of distinct zones to three instead of two as taught by Kurata for safety in case one or two zones are damaged, and also include the strands of heating wire as taught by Sugiyama for better strength and in a composition as taught by Nagai as an obvious functional equivalent.

11. Claims 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noda, Steuart, Masubuchi, Hasegawa, Kurata, Plummer, Sugiyama and Nagai and further in view of Haag.

Noda in view of Steuart, Masubuchi, Hasegawa, Kurata, Plummer, Sugiyama and Nagai discloses substantially the claimed invention, but does not disclose that the cushion is laminated to the separator with an adhesive and a two way tape. Haag teaches a heated steering wheel with a heating element 28, wherein the cushion 24 is laminated to the separator 30 with a double adhesive tape 25 (col. 4, lines 40-50). It would have been obvious to one having ordinary skill in the art to modify the invention of Noda, Steuart, Masubuchi, Hasegawa, Kurata Plummer, Sugiyama and Nagai to include a double adhesive tape as taught by Haag in order to better secure the structure of the heated wheel.

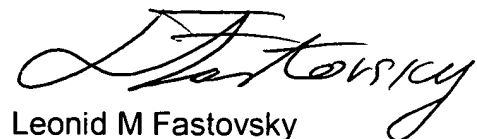
Response to Arguments

12. Applicant's arguments with respect to claims 21-40 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid M Fastovsky whose telephone number is 571-272-4778. The examiner can normally be reached on M-Th. 8.00 am -6.00 pm.

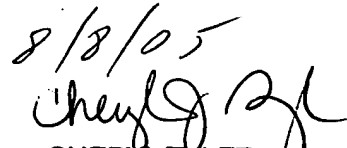
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robin Evans can be reached on 571-272-4777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Leonid M Fastovsky
Examiner
Art Unit 3742

lmf

8/8/05


CHERYL TYLER
SUPERVISORY PATENT EXAMINER